

1. Record Nr.	UNINA9910830955703321
Titolo	Phytochemical drug discovery for central nervous system disorders : biochemistry and therapeutic effects // edited by Chukwuebuka Egbuna, Mithun Rudrapal
Pubbl/distr/stampa	Hoboken, New Jersey : , : John Wiley & Sons, Inc., , [2023] ©2023
ISBN	1-119-79411-0 1-119-79412-9
Descrizione fisica	1 online resource (615 pages)
Disciplina	737
Soggetti	Central nervous system - Diseases
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Intro -- Table of Contents -- Title Page -- Copyright Page -- Contributors -- Preface -- 1 Central Nervous System Disorders and Food and Drug Administration-Approved Drugs -- 1.1 Incidence and Prevalence of Major Neurologic Disorders -- 1.2 Etiology -- 1.3 Pathogenesis -- 1.4 Central Nervous System Disorders and Drugs Approved by the Food and Drug Administration -- 1.5 Conclusion -- References -- 2 Drug Discovery from Medicinal Plants against Parkinson's Disease -- 2.1 Pathogenesis of Parkinson's Disease -- 2.2 Natural Dopaminergic Neuroprotective Compounds -- 2.3 Nitrogenated Phytochemicals -- 2.4 Chinese Herbal Medications and Parkinson's Disease -- 2.5 Herbal Medicines from India and Parkinson's Disease -- 2.6 European Plants -- 2.7 Synuclein as a Potential Therapeutic Target -- 2.8 Conclusion -- References -- 3 Drug Discovery from Medicinal Plants against Alzheimer's Disease -- 3.1 Pathogenesis -- 3.2 Treatment Strategies for Alzheimer's Disease -- 3.3 Medicinal Plants Having Effects against Alzheimer's Disease -- 3.4 Natural Products with Proven AntiAlzheimer's Activity -- 3.5 Conclusion -- References -- 4 Effects of Medicinal Plants and Phytochemicals on Schizophrenia -- 4.1 Mechanisms of Action Related to Schizophrenia -- 4.2 Ayurvedic Plants Used as Treatment for Schizophrenia and Related Psychoses -- 4.3 Conclusion -- References -- 5 Drug

Discovery from Medicinal Plants and Phytochemicals against Neuropathic Pain -- 5.1 Mechanisms of Neuropathic Pain -- 5.2 Animal Models for Studying Neuropathic Pain -- 5.3 Medicinal Plants and Phytochemicals against Neuropathic Pain -- 5.4 Role of Plants and Phytochemicals in Different Neuropathic Pain Models -- 5.5 Future Perspectives -- 5.6 Conclusion -- References -- 6 Brain Function, Stroke, and Medicinal Herbs -- 6.1 Brain Function and Stroke -- 6.2 Strategies for Treatment of Ischemic Stroke. 6.3 Medicinal Plants for the Treatment of Stroke -- 6.4 Natural Products for the Treatment of Stroke -- 6.5 Recent Applications of Nanomedicine for Treatment of Stroke -- 6.6 Conclusion -- References -- 7 PlantBased Analgesics -- 7.1 Current Analgesic Drugs and Their Mechanisms of Action -- 7.2 PlantDerived Lead Compounds with Analgesic Activities -- 7.3 Analgesic Effects of Medicinal Plants Found in Nigeria -- 7.4 Limitations of PlantBased Analgesics -- 7.5 Future Directions and Perspective for PlantBased Analgesics -- 7.6 Conclusion -- References -- 8 Medicinal Plants and Phytochemicals against Depression -- 8.1 Causes of Depression -- 8.2 Symptoms of Depression -- 8.3 Diagnosis of Depression -- 8.4 Types of Depression -- 8.5 Treatment of Depression -- 8.6 Conclusion -- References -- 9 Antiinflammatory Agents from Medicinal Plants -- 9.1 Role of Neuroinflammation in Neurodegenerative Diseases -- 9.2 Neuroinflammatory Drugs -- 9.3 Medicinal Plants as Sources of Anti inflammatory Agents -- 9.4 Bioactive Compounds as Antiinflammatory Agents -- 9.5 Conclusion -- References -- 10 PlantBased Products and Phytochemicals against Viral Infections of the Central Nervous System -- 10.1 Viral Infections of the Central Nervous System -- 10.2 Plant and Phytochemicals as Antiviral Agents for Central Nervous System Viral Infections -- 10.3 Controlling Vectors of Viral Diseases of the Central Nervous System -- 10.4 Future Perspectives -- 10.5 Conclusion -- References -- 11 Fruits and Nutraceuticals for the Prevention and Treatment of Central Nervous System Disorders -- 11.1 Fruits for Cognition and Brain Health -- 11.2 Nutraceuticals in Ameliorating Neurodegeneration -- 11.3 Nutraceuticals in Alzheimer's Disease -- 11.4 Nutraceuticals in Parkinson's Disease -- 11.5 Nutraceuticals in Depression -- 11.6 Nutraceuticals in Psychotic Disorders -- 11.7 Conclusion. References -- 12 Neurorestorative Potential of Medicinal Plants and Their Phytochemicals -- 12.1 Therapeutic Value of Some Medicinal Plants and their Importance -- 12.2 Types of Medicinal Plants and Their Uses -- 12.3 Phytochemicals -- 12.4 Phytochemical Constituents in Some Medicinal Plants -- 12.5 The Brain -- 12.6 Brain Conditions -- 12.7 Protective Effects of Medicinal Plants on the Brain -- 12.8 Conclusion -- References -- 13 Neurotransmitter Modulation by Phytochemicals -- 13.1 Sources, Structures, and Classifications of Phytochemicals -- 13.2 Neurotransmitters and Their Functions -- 13.3 Modulation of Cholinergic Signaling by Phytochemicals -- 13.4 Effect of Phytochemicals on GABAergic Signaling -- 13.5 Effect of Phytochemicals on Glutamatergic Signaling -- 13.6 Modulation of Serotonergic and Dopaminergic Signaling by Phytochemicals -- 13.7 Conclusion -- Acknowledgments -- References -- 14 Antipyretic Agents from Plant Origins -- 14.1 Pyrexia Development, Its Mechanisms, and the Roles of Plant Metabolites as Antipyretics -- 14.2 Antipyretic Agents of Plant Origin -- 14.3 Conclusion and Future Perspectives -- References -- 15 Medicinal Herbs against Central Nervous System Disorders -- 15.1 Medicinal Plants as Interventions for Central Nervous System Disorders -- 15.2 Some Medicinal Plants with Neuroprotective Action on Central Nervous System Disorders -- 15.3

Some Central Nervous System Disorders and Medicinal Plant Interventions -- 15.4 Some Mechanistic Actions of Medicinal Herbs against Central Nervous System Disorders -- 15.5 Conclusion -- References -- 16 Important Antihistaminic Plants and Their Potential Role in Health -- 16.1 Antihistaminic Plants -- 16.2 Bioactive Compounds with Antihistaminic Activities -- 16.3 Conclusion -- References -- 17 Effect of PlantBased Anticonvulsant Products and Phytochemicals.

17.1 Types of Epileptic Seizures -- 17.2 Basic Mechanisms of Epilepsy -- 17.3 Epilepsy and Oxidative Stress -- 17.4 Epilepsy and Inflammation -- 17.5 Tests for Seizure Induction -- 17.6 Medicinal Plants Used to Treat Epilepsy -- 17.7 Conclusion -- References -- 18 Application of Nanophytomedicine for the Treatment of Central Nervous System Disorders -- 18.1 Neurodegenerative Disease and the Blood-Brain Barrier -- 18.2 Nano Approaches to Central Nervous System Drug Delivery -- 18.3 Nanophytomedicine for Treatment of Central Nervous System Disorders -- 18.4 Challenges in Nanophytomedicine -- 18.5 Conclusion -- References -- Index -- End User License Agreement.

Sommario/riassunto

"This book explores the unique biochemistry of the central nervous system (CNS) and the roles of plant-based products in the development of new drugs for the treatment of complex and lesser-known CNS disorders. The chapters document the various novel phytochemicals and their sources, which could serve as drug candidates for drug discovery against CNS disorders. Written by a global team of experts, this book is useful to drug developers, medicinal chemists, drug discovery scientists, researchers in pharmaceutical R&D, students and faculty members in the academia"--
